SEQUENCE LISTING

<110> Zhou, Shibin
     Zawel, Leigh
     Vogelstein, Bert
     Kinzler, Kenneth

<120> Human Fast-1 Gene

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<141> 1998-07-10

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ggtggagact gaggcctcag gagaagcccc cactagaatg ctctctgccc ctcccttcca       360
gattaaccaa aacctgctaa ttgtggaagc cctcggcatg ctcccctccc ccacagcctc       420
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<210> 2
<211> 365

1

<212> PRT
<213> Homo sapiens

<400> 2
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1               5                   10                  15
Pro Ser Gln Pro Pro Lys Arg Arg Lys Lys Arg Tyr Leu Arg His Asp
            20                  25                  30
Lys Pro Pro Tyr Thr Tyr Leu Ala Met Ile Ala Leu Val Ile Gln Ala
        35                  40                  45
Ala Pro Ser Arg Arg Leu Lys Leu Ala Gln Ile Ile Arg Gln Val Gln
    50                  55                  60
Ala Val Phe Pro Phe Arg Glu Asp Tyr Glu Gly Trp Lys Asp Ser
65                  70                  75                  80
Ile Arg His Asn Leu Ser Ser Asn Arg Cys Phe Arg Lys Val Pro Lys
                85                  90                  95
Asp Pro Ala Lys Pro Gln Ala Lys Gly Asn Phe Trp Ala Val Asp Val
            100                 105                 110
Ser Leu Ile Pro Ala Glu Ala Leu Arg Leu Gln Asn Thr Ala Leu Cys
        115                 120                 125
Arg Arg Trp Gln Asn Gly Gly Ala Arg Gly Ala Phe Ala Lys Asp Leu
    130                 135                 140
Gly Pro Tyr Val Leu His Gly Arg Pro Tyr Arg Pro Pro Ser Pro Pro
145                 150                 155                 160
Pro Pro Pro Ser Glu Gly Phe Ser Ile Lys Ser Leu Leu Gly Gly Ser
                165                 170                 175
Gly Glu Gly Ala Pro Trp Pro Gly Leu Ala Pro Gln Ser Ser Pro Val
            180                 185                 190
Pro Ala Gly Thr Gly Asn Ser Gly Glu Glu Ala Val Pro Thr Pro Pro
        195                 200                 205
Leu Pro Ser Ser Glu Arg Pro Leu Trp Pro Leu Cys Pro Leu Pro Gly
    210                 215                 220
Pro Thr Arg Val Glu Gly Glu Thr Val Gln Gly Gly Ala Ile Gly Pro
225                 230                 235                 240
Ser Thr Leu Ser Ser Pro Glu Pro Arg Ala Trp Pro Leu His Leu Leu Gln
                245                 250                 255
Gly Thr Ala Val Pro Gly Gly Arg Ser Ser Gly Gly His Arg Ala Ser
            260                 265                 270
Leu Trp Gly Gln Leu Pro Thr Ser Tyr Leu Pro Ile Tyr Thr Pro Asn
        275                 280                 285
Val Val Met Pro Leu Ala Pro Pro Pro Thr Ser Cys Pro Gln Cys Pro
    290                 295                 300
Ser Thr Ser Pro Ala Tyr Trp Gly Val Ala Pro Glu Thr Arg Gly Pro
305                 310                 315                 320
Pro Gly Leu Leu Cys Asp Leu Asp Ala Leu Phe Gln Gly Val Pro Pro
                325                 330                 335
Asn Lys Ser Ile Tyr Asp Val Trp Val Ser His Pro Arg Asp Leu Ala
            340                 345                 350
Ala Pro Gly Pro Gly Trp Leu Leu Ser Trp Cys Ser Leu
    355                 360                 365
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<210> 3
<211> 477
<212> PRT
<213> Homo sapiens

<400> 3
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Val Ala Met Ile Asn Ala Cys Ile Asp Ser Met Ser Ser Ile Leu Pro
1               5                   10                  15
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2

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Phe Thr Pro Pro Val Val Lys Arg Leu Leu Gly Trp Lys Lys Ser Ala
              20                      25                      30
Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu Gln Asn Gly Gln Glu Glu
          35                      40                      45
Lys Trp Cys Glu Lys Ala Val Lys Ser Leu Val Lys Lys Leu Lys Lys
    50                      55                      60
Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala Ile Thr Thr Gln Asn Cys
65                      70                      75                      80
Asn Thr Lys Cys Val Thr Ile Pro Ser Thr Cys Ser Glu Ile Trp Gly
              85                      90                      95
Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp Asp Thr Thr Gly Leu Tyr
              100                     105                     110
Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp Gly Arg Leu Gln Val Ser
          115                     120                     125
His Arg Lys Gly Leu Pro His Val Ile Tyr Cys Arg Leu Trp Arg Trp
          130                     135                     140
Pro Asp Leu His Ser His His Glu Leu Lys Ala Ile Glu Asn Cys Glu
145                     150                     155                     160
Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val Cys Val Asn Pro Tyr His
              165                     170                     175
Tyr Gln Arg Val Glu Thr Pro Val Leu Pro Pro Val Leu Val Pro Arg
          180                     185                     190
His Thr Glu Ile Leu Thr Glu Leu Pro Pro Leu Asp Asp Tyr Thr His
          195                     200                     205
Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala Gly Ile Glu Pro Gln Ser
          210                     215                     220
Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly Tyr Ile Ser Glu Asp Gly
225                     230                     235                     240
Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser Met Asp Thr Gly Ser Pro
                  245                     250                     255
Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro Val Asn His Ser Leu Asp
          260                     265                     270
Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala Phe Trp Cys Ser Ile Ala
          275                     280                     285
Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu Thr Phe His Ala Ser Gln
    290                     295                     300
Pro Ser Leu Thr Val Asp Gly Phe Thr Asp Pro Ser Asn Ser Glu Arg
305                     310                     315                     320
Phe Cys Leu Gly Leu Leu Ser Asn Val Asn Arg Asn Ala Thr Val Glu
              325                     330                     335
Met Thr Arg Arg His Ile Gly Arg Gly Val Arg Leu Tyr Tyr Ile Gly
          340                     345                     350
Gly Glu Val Phe Ala Glu Cys Leu Ser Asp Ser Ala Ile Phe Val Gln
          355                     360                     365
Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp His Pro Ala Thr Val Cys
          370                     375                     380
Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile Phe Asn Asn Gln Glu Phe
385                     390                     395                     400
Ala Ala Leu Leu Ala Gln Ser Val Asn Gln Gly Phe Glu Ala Val Tyr
                  405                     410                     415
Gln Leu Thr Arg Met Cys Thr Ile Arg Met Ser Phe Val Lys Gly Trp
          420                     425                     430
Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr Ser Thr Pro Cys Trp Ile
          435                     440                     445
Glu Leu His Leu Asn Gly Pro Leu Gln Trp Leu Asp Lys Val Leu Thr
    450                     455                     460
Gln Met Gly Ser Pro Ser Val Arg Cys Ser Ser Met Ser
465                     470                     475
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3

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        <210> 4
        <211> 8
        <212> DNA
        <213> Homo sapiens

        <400> 4
tgtkkatt                                                                    8


        <210> 5
        <211> 18
        <212> DNA
        <213> Homo sapiens

        <400> 5
ctggaaagac tccattcg                                                        18


        <210> 6
        <211> 19
        <212> DNA
        <213> Homo sapiens

        <400> 6
cacagaggcc tctcagaag                                                       19


        <210> 7
        <211> 18
        <212> DNA
        <213> Homo sapiens

        <400> 7
ccccttcca tccgaatg                                                         18


        <210> 8
        <211> 19
        <212> DNA
        <213> Homo sapiens

        <400> 8
gagctgctgt gtcgcagac                                                       19


        <210> 9
        <211> 79
        <212> DNA
        <213> Artificial Sequence

        <220>
        <223> flag primer

        <400> 9
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ggggccctgc agcggctcc                                                       79


        <210> 10
        <211> 81
        <212> DNA
        <213> Artificial Sequence

        <220>
        <223> flag primer
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        <400> 10
ggatcctaat acgactcact ataggagac caccatggac tacaaggacg acgatgacaa          60
gccccttcct ggccccacga g                                                   81

        <210> 11
        <211> 31
        <212> DNA
        <213> Homo sapiens

        <400> 11
tatgcggccg ccaccatggg gccctgcagc g                                        31

        <210> 12
        <211> 30
        <212> DNA
        <213> Homo sapiens

        <400> 12
tatgcggccg cgagctgctg tgtcgcagac                                          30

        <210> 13
        <211> 7
        <212> DNA
        <213> Homo sapiens

        <400> 13
rymaaya                                                                    7

        <210> 14
        <211> 22
        <212> DNA
        <213> Homo sapiens

        <400> 14
tagtaaacac tctatcaatt gg                                                   22

        <210> 15
        <211> 20
        <212> DNA
        <213> Homo sapiens

        <400> 15
gtccagtatc gtttacagcc                                                      20

        <210> 16
        <211> 21
        <212> DNA
        <213> Homo sapiens

        <400> 16
cggattgtgt attggctgta c                                                    21

        <210> 17
        <211> 21
        <212> DNA
        <213> Homo sapiens

        <400> 17
cggattctgt atcggctgta c                                                    21
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5

```
<210> 18
<211> 55
<212> DNA
<213> Homo sapiens

<400> 18
tatctgctgc cctaaaatgt gtattccatg gaaatgtctg cccttctctc cgtac                55


<210> 19
<211> 518
<212> PRT
<213> Xenopus laevis

<400> 19
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1               5                   10                  15
Tyr Glu Ser Val Glu Pro Pro Ser Leu Ala Leu Leu Ser Ser Ile Asp
            20                  25                  30
Gln Glu Gln Leu Pro Val Ala Thr Gly Gln Ser Tyr Asn His Ser Val
        35                  40                  45
Gln Pro Trp Pro Gln Pro Trp Pro Pro Leu Ser Leu Tyr Arg Glu Gly
    50                  55                  60
Gly Thr Trp Ser Pro Asp Arg Gly Ser Met Tyr Gly Leu Ser Pro Gly
65                  70                  75                  80
Thr His Glu Gly Ser Cys Thr His Thr His Glu Gly Pro Lys Asp Ser
            85                  90                  95
Met Ala Gly Asp His Thr Arg Ser Arg Lys Ser Lys Lys Lys Asn Tyr
            100                 105                 110
His Arg Tyr Tyr Lys Pro Pro Tyr Ser Tyr Leu Ala Met Ile Ala Leu
        115                 120                 125
Val Ile Gln Asn Ser Pro Glu Lys Arg Leu Lys Leu Ser Gln Ile Leu
    130                 135                 140
Lys Glu Val Ser Thr Leu Phe Pro Phe Phe Asn Gly Asp Tyr Met Gly
145                 150                 155                 160
Trp Lys Asp Ser Ile Arg His Asn Leu Ser Ser Ser Asp Cys Phe Lys
            165                 170                 175
Lys Ile Leu Lys Asp Pro Gly Lys Pro Gln Ala Lys Gly Asn Phe Trp
            180                 185                 190
Thr Val Asp Val Ser Arg Ile Pro Leu Asp Ala Met Lys Leu Gln Asn
        195                 200                 205
Thr Ala Leu Thr Arg Gly Gly Ser Asp Tyr Phe Val Gln Asp Leu Ala
    210                 215                 220
Pro Tyr Ile Leu His Asn Tyr Lys Tyr Glu His Asn Ala Gly Ala Tyr
225                 230                 235                 240
Gly His Gln Met Pro Pro Ser His Ala Arg Ser Leu Ser Leu Ala Glu
            245                 250                 255
Asp Ser Gln Gln Thr Asn Thr Gly Gly Lys Leu Asn Thr Ser Phe Met
        260                 265                 270
Ile Asp Ser Leu Leu His Asp Leu Gln Glu Val Asp Leu Pro Asp Ala
    275                 280                 285
Ser Arg Asn Leu Glu Asn Gln Arg Ile Ser Pro Ala Val Ala Met Asn
    290                 295                 300
Asn Met Trp Ser Ser Ala Pro Leu Leu Tyr Thr His Ser Lys Pro Thr
305                 310                 315                 320
Arg Asn Ala Arg Ser Pro Gly Leu Ser Thr Ile His Ser Thr Tyr Ser
            325                 330                 335
Ser Ser Ser Ser Ile Ser Thr Ser Ser Pro Val Gly Phe Gln Lys
        340                 345                 350
Glu Gln Glu Lys Ser Gly Arg Gln Thr Gln Arg Val Gly His Pro Ile
```

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```
              355                    360                    365
Lys Arg Ser Arg Glu Asp Asp Asp Cys Ser Thr Thr Ser Ser Asp Pro
    370                    375                    380
Asp Thr Gly Asn Tyr Ser Pro Ile Glu Pro Pro Lys Lys Met Pro Leu
385                    390                    395                    400
Leu Ser Leu Asp Leu Pro Thr Ser Tyr Thr Lys Ser Val Ala Pro Asn
                   405                    410                    415
Val Val Ala Pro Pro Ser Val Leu Pro Phe Phe His Phe Pro Arg Phe
            420                    425                    430
Thr Tyr Tyr Asn Tyr Gly Pro Ser Pro Tyr Met Thr Pro Pro Tyr Trp
        435                    440                    445
Gly Phe Pro His Pro Thr Asn Ser Gly Gly Asp Ser Pro Arg Gly Pro
    450                    455                    460
Gln Ser Pro Leu Asp Leu Asp Asn Met Leu Arg Ala Met Pro Pro Asn
465                    470                    475                    480
Lys Ser Val Phe Asp Val Leu Thr Ser His Pro Gly Asp Leu Val His
                   485                    490                    495
Pro Ser Phe Leu Ser Gln Cys Leu Gly Ser Ser Gly Ser Pro Tyr Pro
            500                    505                    510
Ser Arg Gln Gly Leu Met
            515
```

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